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TAGS: [ENRG](#) [TRGY](#) [SENV](#) [KNNP](#) [UK](#)
SUBJECT: UK RAMPING UP ON NUCLEAR POWER, BUT CHALLENGES
REMAIN

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Classified By: Economic Counselor Kathleen Doherty for reasons 1.4 (b)
and (d)

¶1. (C/NF) Summary. HMG is making steady progress in launching its ambitious plan to build eleven new nuclear power plants between 2018-2025. The UK will need to address several challenges, including workforce issues, nuclear waste, planning procedures, reactor design, and site assessment procedures for this effort to be successful. A diverse industry with a mix of corporate players and different nuclear reactor technologies is emerging. Nuclear energy enjoys support from both the Labour and Conservative Parties as a way to reach a targeted 80 percent reduction in greenhouse gases by 2050. HMG and industry, however, will need to collaborate closely for this nuclear new build plan to work. End Summary.

UK TIMELINE FOR NUCLEAR NEW BUILD

¶2. (SBU) Nuclear power currently accounts for only 15 percent of the UK's electricity and HMG wants to double this amount. HMG wants to have the first nuclear site up and running by 2018, with all eleven plants fully operational by 2025. Plans established by the Department of Energy and Climate Change (DECC) are currently on schedule. DECC's Office of Nuclear Development (OND) received nominations from industry players for eleven recommended nuclear power sites on March 31, 2009. OND published these sites in a month-long public comment on April 14. OND is now developing a National Policy Statement (NPS) on Nuclear Energy, expected to be completed by autumn 2009. The NPS on Nuclear Energy will then undergo public comment before it is sent for "Parliamentary scrutiny" around March 2010. The final step is for the Nuclear NPS to be passed to the newly created UK Infrastructure Planning Commission (IPC) in March/April 2010. The IPC will then use it as a policy framework as it reviews planning applications for new nuclear power plants. It is still too early to have a 'calendar' for when construction might start on individual power plants.

THE BUSINESS PLAYING FIELD

¶3. (C/NF) DECC officials tell us HMG wants a variety of industry players involved in new nuclear build. French-owned company EDF Energy became a major player when it bought out British Energy (BE) in January 2009 for 12.5 billion GBP (\$20.5 billion). EDF Energy uses French-owned company Areva's EPR nuclear reactors. Areva is the main competitor of U.S. company Westinghouse, which produces the AP1000 reactor. EDF Energy submitted nominations for five sites, which include Hartlepool, Heysham, Dungeness, Hinkley Point, and Sizewell B. EDF also bought land owned by the Nuclear Decommissioning Authority (NDA) in April at the Bradwell site.

¶4. (C/NF) Plans currently call for all nuclear new build to be funded completely by the private sector. However, EDF criticized HMG publicly in May for not providing subsidies. MP Jamie Reed (Labour Party) commented to ESTHoff shortly after this public announcement, "EDF should not expect any subsidies from HMG." The new Energy Minister at DECC, Lord Hunt, reinforced this view in a public statement in mid-June. EDF Energy is now retreating from its comments on subsidies and is asking for a "level playing field" of financial incentives comparable to the renewable energy and carbon capture and storage (CCS) sectors.

¶5. (C/NF) German-owned utilities E.On and RWE formed a joint venture and bought land in April owned by the Nuclear Decommissioning Authority (NDA) at Oldbury and Wylfa. David Powell with Westinghouse told us RWE also owns land at Kirksanton and Braystones, two other nominated sites. While RWE does not have specific plans yet for the land, said Powell, he speculates RWE may partner with E.On to develop these sites. Westinghouse is bidding to partner with RWE and E.On on the Oldbury and Wylfa sites in the near-term to provide the AP1000 reactor, but will not know the outcome until December 2009. Powell added Westinghouse will probably pick U.S. company Fluor and a U.K. company to provide related engineering, procurement, and construction (EPC) services as part of the overall contract with E.On and RWE at these two sites. NDA also has unused land at Sellafield, noted Powell, and he suspects the consortium of Iberdola (Spain), GDF Suez (Belgium) and Scottish Energy may buy this property.

¶6. (C/NF) Westinghouse also operates the Springfield fuel

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processing plant in Preston, and supplies the majority of nuclear fuel to nuclear plants in the UK. David Powell told ESTHoff that Westinghouse is negotiating with NDA, DECC, and others to lease additional land owned by NDA to expand its capacity for processing enriched uranium. Westinghouse said there is a deadline of March 31, 2010 to determine whether this new arrangement will work, since the current agreement expires at that time. The Springfield fuel plant currently employs approximately 1500 workers and ships approximately 200 tons of fuel a year to nuclear plants in the UK. The UK Nuclear National Lab (NNL) conducts research and development on uranium fuel on this site.

NEW PLANNING AND ASSESSMENT PROCESSES MAY CAUSE DELAYS

¶7. (C/NF) The timeline for nuclear new build may begin to slip. One key issue is a General Design Assessment (GDA) conducted by the historically understaffed Health and Safety Executive's (HSE's) Nuclear Installation Inspectorate (NII). While David Powell with Westinghouse expressed concern to us in the past about NII devoting disproportionate resources to reviewing Areva's nuclear reactor design, he told us on June 26 the situation has improved since NII recently increased its staff (and salaries) to meek workload demands. NII is also responsible for issuing nuclear site licenses. Both the GDA and nuclear site licenses are expected to be completed in mid-2011. Given the overlap on the deadline for both procedures, Powell said there is concern NII will not be able to keep up with the dual workload.

¶8. (C/NF) A major unknown is the new UK Infrastructure Planning Commission (IPC), which was created by the 2008 Planning Act. Planning applications for nuclear new build will need to be submitted to the UK IPC under this new system. IPC is in the process of hiring staff, appointing CEOs and senior commissioners, and will not begin reviewing or advising on planning applications until sometime in March/April 2010. One NDA official and other industry players have confided to ESTHoff this process could be delayed. HMG will provide national policy statements (NPSs) to be used as the policy framework for the Commission's

decisions.

FUTURE DEMANDS ON THE NUCLEAR WORKFORCE

¶9. (SBU) The nuclear energy sector in the UK faces three workforce challenges: an aging workforce where most workers are between 45-54 years old; a skills gap; and the difficulty in attracting enough workers as demand ramps up. According to the UK Nuclear Industry Association (NIA), 40,000 jobs in the UK are directly attributable to the nuclear energy sector (ref A). The largest employer is the Sellafield site in Cumbria, with 11,000 workers. Demand is strong in the UK for "new blood" in the nuclear work force. Dr. Andrew Sherry of the Dalton Nuclear Institute at the University of Manchester speculated to ESTHOff the number of workers in the nuclear sector in the UK will need to increase by 18,000 over the next 20 years.

¶10. (SBU) The Nuclear National Skills Academy, established in 2007 as a membership-based organization, has the lead on training efforts in close coordination with UK universities, industry, and government agencies. Secretary of the Department of Energy and Climate Change (DECC) Ed Miliband recently unveiled a new 20 million GBP (\$32.8 million) facility on June 19 -- the Energus Center -- in West Cumbria to provide training near the Sellafield nuclear site. Dr. Sherry also told ESTHOff there is a network of UK educational institutions developing a masters program for nuclear engineering. A collaborative effort between the Dalton Nuclear Institute, Nuclear National Skills Academy, and the UK National Nuclear Lab (NNL) includes providing apprenticeships to university students.

DEALING WITH NUCLEAR WASTE

¶11. (C/NF) Safe disposal of nuclear waste is a big challenge. Even NDA officials say publicly this is one of the biggest challenges for the UK. Chief Scientist at the UK National Nuclear Lab (NNL) Graham Fairhill told ESTHOff that HMG is assessing geographic areas in the UK for "deep disposal" of used plutonium and spent fuel. Waste management research is one of the UK NNL's highest priorities. Fairhill told ESTHOff the Copeland/Cumbria region -- where Sellafield is located -- "volunteered" to be one of the UK depositories

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for nuclear waste. MP Reed (Labour Party) had a different view, however, when asked by ESTHOff and said his constituency in Copeland/Cumbria is interested in helping HMG "work through" the process of dealing with nuclear waste, but "will not just do it for them." Even Fairhill speculated local government officials in the Copeland/Cumbria region will demand some "financial incentives" from HMG in return for serving as a disposal site for nuclear waste.

THE WHITE ELEPHANT: MOX PLANT

¶12. (C/NF) The Mox Plant, established to process and recycle mixed oxide (mox) fuel at Sellafield, continues to be a "white elephant" for HMG. The Mox Plant is considered one of HMG's most embarrassing failures in British industrial history, costing taxpayers 90 million GBP (\$147 million) a year. The plant's complex fuel recycling procedure, coupled with management and equipment problems, have plagued it for years. NDA is under public and parliamentary pressure to make a decision on whether to keep the plant open or close it down. The fact that Areva was brought in to fulfill the commercial contracts that the Mox plant could not fulfill also adds to its political unpopularity. NDA officials told ESTHOff any of the options -- investing in the plant or closing it down -- will be expensive. There are no clear answers for HMG, but in the meantime the plant continues to drain resources and is a black mark for the entire industry

at a time when HMG is trying to ramp up its nuclear new build efforts.

OTHER SUPPORT FOR NUCLEAR NEW BUILD EFFORTS

¶13. (C/NF) HMG is developing a "center for excellence" in nuclear research to support new build and decommissioning efforts. In late March 2009, then Minister of Energy Mike O'Brien announced Serco, Battelle, and the University of Manchester had been chosen to run the UK National Nuclear Lab (NNL). Chief Scientist Graham Fairhill said there are areas for U.S.-UK collaboration, given that U.S.-based Battelle is a partner in this effort. NNL's activities range from researching strategies to deal with nuclear waste, to providing reactor analysis and fuel services, among others. One of NNL's new labs was established to deal with handling plutonium fuel. This facility will be operational in a year. Fairhill added that he envisions partnership opportunities between the UK, U.S., EU, and Japan in using the facility once it is up and running.

COMMENT

¶14. (C/NF) Nuclear new build enjoys good political support at DECC and more broadly, within HMG, and industry players are satisfied with the support they get from DECC Secretary Miliband and recently appointed Minister of Energy Lord Hunt. However, the ambitious timeline established by DECC does not allow much room for delays. There will need to be a concerted effort within HMG and private industry to make even one nuclear plant operational by 2018. There will also need to be a strong public relations campaign throughout the process to build support in communities where new nuclear plants will be located.

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